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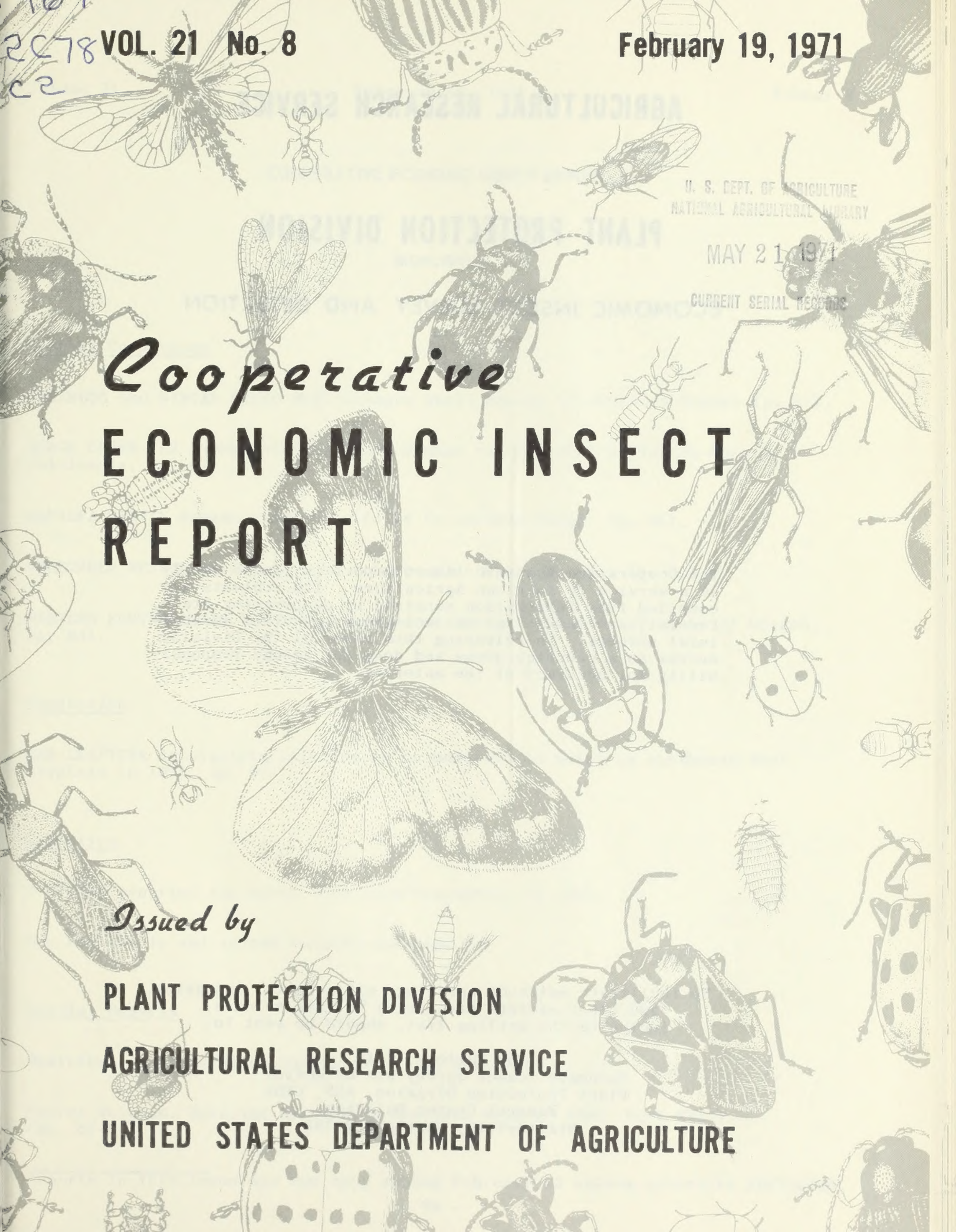

Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PROTECTION DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PROTECTION DIVISION

ECONOMIC INSECT SURVEY AND DETECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Federal Center Building
Hyattsville, Maryland 20782

Volume 21 February 19, 1971 Number 8

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

GREENBUG and WINTER GRAIN MITE damaged small grains in northern Texas. (p. 81).

RANGE CRANE FLY larvae caused severe damage to rangeland in Tulare County, California. (p. 81).

ALFALFA WEEVIL damage heavy on alfalfa in eastern Texas. (p. 81).

VEGETABLE WEEVIL larvae damaged tobacco plants in Florida. (p. 82).

WESTERN SUBTERRANEAN TERMITE winged forms observed in several areas of Oregon. (p. 84).

Prediction

OAK LEAFTIER defoliation expected to be moderate to heavy in southeast West Virginia in 1971. (p. 83).

Detection

A CICADA reported for first time from Wisconsin. (p. 83).

For new county and island records see page 85.

Special Reports

Distribution of European Earwig. Map. (p. 86).

Survey Methods. Selected References for Last Half of 1969. Part XXXIV. (pp. 87-94).

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NATIONAL WEATHER SERVICE'S 30-DAY OUTLOOK

MID-FEBRUARY TO MID-MARCH 1971

The National Weather Service's 30-day outlook for mid-February to mid-March is for temperatures to average below seasonal normals from the Rockies to the Appalachians except for near to above normal in the northern Plains. Above normal temperatures are indicated for the Pacific Northwest, New England, and Florida. In unspecified areas near normal temperatures are in prospect. Precipitation is expected to exceed normal in the South and also over the northern Plains. Subnormal totals are indicated for the Great Basin and central and southern portions of the Pacific coast. Elsewhere near normal precipitation amounts are in prospect.

Weather forecast given here is based on the official 30-day "Resume and Outlook" published twice a month by the National Weather Service. You can subscribe through the Superintendent of Documents, Washington, D.C. 20250. Price $5.00 a year.

WEATHER OF THE WEEK ENDING FEBRUARY 15

HIGHLIGHTS: The weather continued mild in the West. It was the warmest week since mid-December in the Northeast, but coldest week of the winter in the Deep South. Heavy snow fell in parts of the Northeast.

PRECIPITATION: No rain or only widely scattered precipitation occurred from California across the Great Basin and southern Rocky Mountains to the central portions of Oklahoma and Texas. Light rain or snow fell across the northern border States from eastern Washington to the Great Lakes and over the central Great Plains. Over 2 inches fell over the Deep South and northeastward to New York and New England. Severe weather occurred over much of the eastern half of the Nation early in the week. Heavy snow fell in parts of New York and New England on Monday. Heavy showers and thunderstorms occurred south of the snow belt. A tornado occurred at Barretts, Georgia, and thunderstorms with winds to 50 m.p.h. whipped the Tallahassee, Florida, area. Another tornado touched down near Tampa, Florida, and winds at St. Petersburg gusted to 68 m.p.h. Flash floods occurred along the coast from extreme southeastern Pennsylvania and New Jersey to Georgia. Snow fell in portions of the Appalachians from Kentucky and North Carolina to Connecticut on Tuesday, and on Wednesday flurries were noted in the Great Lakes vicinity. Precipitation in the East slackened after midweek, but a new storm off the northern Pacific coast began to dampen coastal areas and occasional snow fell in the northern and central Rocky Mountains. Weather of the week continued on page 84.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

BEET LEAFHOPPER (*Circulifer tenellus*) - CALIFORNIA - About 5,119 acres treated in western Kings and Fresno Counties. Overwintering leafhoppers greatly extended breeding area in Cantua and Toomey Canyon areas of western Fresno County; required treatment of larger acreage. (Cal. Coop. Rpt.).

CORN LEAF APHID (*Rhopalosiphum maidis*) - NEW MEXICO - Medium to heavy on barley in Luna County. (Campbell).

GREENBUG (*Schizaphis graminum*) - ARIZONA - Very light on barley and wheat on eastern side of Salt River Valley, Maricopa County. (Ariz. Coop. Sur.). NEW MEXICO - Ranged 0-20 per linear foot of wheat in Curry and Roosevelt Counties. (Mathews). TEXAS - Generally light in Panhandle counties. Heavy damage in Knox County in Rolling Plains where no controls applied. Some damage reported in Bailey, Cottle, Dickens, Foard, Hardeman, Wichita, and Wilbarger Counties. Controls applied on limited scale in several counties. In north area, near Denton, activity slowed due to cold weather. (Boring, Turney).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - ARIZONA - Very light on alfalfa in most areas of Salt River Valley, Maricopa County. (Ariz. Coop. Sur.). NEW MEXICO - Ranged 2-20 per square foot in Chaves County alfalfa. Heaviest in seedling alfalfa. (Mathews). Populations in Dona Ana County remain generally light. (Campbell).

SMALL GRAINS

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - Heavy and damaged wheat in Foard and Hardeman Counties. (Boring).

TURF, PASTURES, RANGELAND

RANGE CRANE FLY (*Tipula simplex*) - CALIFORNIA - Infestation in Tulare County continues to damage additional areas. About 1,000 acres in Yokohl Valley show severe damage with many "slicks" on hillsides and extending into flatlands. (Cal. Coop. Rpt.).

A BILLBUG (*Sphenophorus venatus confluens*) - OREGON - Damage heavy in 100-acre planting of Merion bluegrass in Linn County. Overwintering adults present in crown area. Field probably will be replanted. (Kamm, Feb. 5).

FORAGE LEGUMES

ALFALFA WEEVIL (*Hypera postica*) - ARKANSAS - Heavy in alfalfa in Miller County. Recent cold weather slowed activity. Expect activity to increase with warm temperatures. (Jones). TEXAS - Damage heavy in Ellis and Navarro Counties. About 50 acres of alfalfa plowed up due to severe damage early this year. Heavy in alfalfa in Burleson County, some controls applied. (Green, Turney).

PEA APHID (*Acyrthosiphon pisum*) - NEW MEXICO - Building up, ranged 2-50 per square foot in Chaves County alfalfa. (Mathews).

PALE WESTERN CUTWORM (*Agrotis orthogonia*) - ARIZONA - Larvae 2 per square foot of sheep grazed alfalfa between Mesa and Chandler, Maricopa County. (Ariz. Coop. Sur.).

THREECORNERED ALFALFA HOPPER (*Spissistilus festinus*) - CALIFORNIA - Counts of 7 per sweep in 60-acre alfalfa planting at Woodland, Yolo County. (Cal. Coop. Rpt.).

TOBACCO

VEGETABLE WEEVIL (Listroderes costirostris obliquus) - FLORIDA - Larvae heavy in 500 square yards of flue-cured tobacco plant beds in Alachua County; may require treatment and reseeding. Determined by Strayer. (Farrell).

SUGAR BEETS

FALSE CELERY LEAFTIER (Udea profundalis) - CALIFORNIA - Heavy on sugar beet plantings at Knights Landing, Yolo County. (Cal. Coop. Rpt.).

DECIDUOUS FRUITS AND NUTS

ITALIAN PEAR SCALE (Epidiaspis leperii) - CALIFORNIA - Nymphs and adults heavy on apple trees on farm at Portola Valley, San Mateo County. (Cal. Coop. Rpt.).

WOOLLY APPLE APHID (Eriosoma lanigerum) - FLORIDA - Adults on roots of 125 apple plants at Monticello, Jefferson County. (Miller).

CITRUS

Insect Situation in Florida - End of January - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 83 (norm 63) percent of groves; economic in 61 (norm 46) percent. Population continued above normal and very heavy. Decrease expected. Numbers on leaves slightly heavier than on fruit. Highest districts west, south, central, and north. About 30 percent of groves to be heavily infested. CITRUS RED MITE (Panonychus citri) infested 55 (norm 36) percent of groves; economic in 23 (norm 12) percent. Increased and still above normal but at low levels in most districts. Decrease expected. Highest districts south and north. TEXAS CITRUS MITE (Eutetranychus banksi) infested 43 (norm 33) percent of groves; economic in 17 (norm 12) percent. Increased and above January normal. Decrease to normal expected. Highest districts central and south. SIXSPOTTED MITE (Eotetranychus sexmaculatus) appearing in some groves. GLOVER SCALE (Lepidosaphes gloverii) infested 89 (norm 78) percent of groves; economic in 6 (norm 15) percent. Will continue at moderate level and near normal. Highest districts south and west. PURPLE SCALE (L. beckii) infested 77 (norm 77) percent of groves; economic in 3 (norm 7) percent. Little change expected. Highest districts west and north. BLACK SCALE (Saissetia oleae) infested 33 (norm 37) percent of groves; economic in 12 (norm 17) percent. Populations will remain below normal, and decrease further into low range. West district high and south district low. CHAFF SCALE (Parlatoria pergandii) infested 50 (norm 59) percent of groves; economic in 1 (norm 10) percent. Population below normal and at low level in all districts. Little change expected. YELLOW SCALE (Aonidiella citrina) infested 37 (norm 60) percent of groves; economic in 2 (norm 12) percent. Statewide population lowest on record for January and will decrease further. Light in all districts except east. An ARMORED SCALE (Unaspis citri) infested 29 percent of groves; 16 percent moderate or heavy. Increased and higher than any prior January. Further increase expected. WHITEFLIES at normal moderate level. Will decrease until late February, then gradual increase expected. (W.A. Simanton (Citrus Expt. Sta., Lake Alfred)).

OTHER TROP. & SUBTROP. FRUITS

A SOFT SCALE (Saissetia miranda) - CALIFORNIA - Counts of 20 per twig and leaf on fig trees at Bard, Imperial County. This scale known in desert areas for Adult female closely resembles S. oleae (black scale). (Cal. Coop. Rpt.).

SMALL FRUITS

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - FLORIDA - Heavy on 400 acres of strawberries in Manatee County; all stages up to 200 per leaf. One 20-acre field showing considerable leaf bronzing, but damage in most fields not yet apparent February 2. Every field examined heavily infested (60 acres sampled) in Plant City area of Hillsborough County on February 5; controls not satisfactory. (Poe).

ORNAMENTALS

AN ARMORED SCALE (*Fiorinia fioriniae*) - FLORIDA - Collected on bottlebrush, *Callistemon* sp., at Vero Beach, Indian River County, by R.H. Kendrick December 16, 1970. This is a new county record. (Fla. Coop. Sur.).

AN ERIOCOCCID SCALE (*Eriococcus coccineus*) - CALIFORNIA - Mixed populations of this species and *Ferrisia virgata* (striped mealybug) 20 per plant on cactus nursery stock in Lucerne Valley, San Bernardino County. This is a new county record for striped mealybug. Collected by P. Lounsbury January 13, 1971. Determined by R.F. Wilkey. (Cal. Coop. Rpt.).

HOLLYHOCK WEEVIL (*Apion longirostre*) - MISSOURI - Adult collected from hollyhock at Ravenwood, Nodaway County, by L.P. Burgess July 22, 1970. This is a new county record. (Munson).

A ROOT MEALYBUG (*Rhizoecus americanus*) - FLORIDA - Adults on 1 out of 10 hibiscus plants at nursery near Osprey, Sarasota County, February 5, 1971. Collected by J.R. McFarlin and C.J. Bickner. This is a new county and host record. All stages on roots of threadleaf falsearalia (*Dizygotheca elegantissima*) at nursery near Largo, Pinellas County, February 4. (Hickman).

FOREST AND SHADE TREES

OAK LEAFTIER (*Croesia albicomana**) - WEST VIRGINIA - Eggs per 15-inch branch of scarlet oak ranged 16-34 in Pocahontas County and 17-46 in Greenbrier County. Moderate to heavy defoliation expected in these areas. (W. Va. Ins. Sur.).

A CICADA (*Diceroprocta vitripennis*) - WISCONSIN - Specimen collected in mixed stand of cedar and hardwood at Spring Green, Sauk County, by K. Lange July 5, 1970. Determined by T. Moore. Range of this species extended 100-150 miles. This is a new State record. (Conrad).

MAN AND ANIMALS

SCREWWORM (*Cochliomyia hominivorax*) - One case reported in U.S. February 7-13: TEXAS - Hidalgo. Total of 36 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico as follows: Sonora 17, Chihuahua 11, Tamaulipas 8. Total of 5 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screwworm flies released: Texas 3,338,000; Mexico 106,932,000. (Anim. Health Div.).

CATTLE GRUBS (*Hypoderma* spp.) - KENTUCKY - Ranged 1-27 (averaged 6.7) per animal on backs of Holstein cattle of various ages in Fayette County. (Barnett). OKLAHOMA - *H. lineatum* (common cattle grub) remains moderate on Mayes County cattle. (Okla. Coop. Sur.).

HORN FLY (*Haematobia irritans*) - FLORIDA - Adults averaged 2 per cow in dairy herd near Gainesville, Alachua County. (Butler).

MOSQUITOES - CALIFORNIA - Populations exploded and annoying in many areas. Warm weather caused large numbers of hibernating females to emerge and seek blood meal. This break in hibernation about month early. With much standing water mosquito nuisance may be early and severe. (Cal. Coop. Rpt.).

CATTLE LICE (*Haematopinus* spp.) - KENTUCKY - Moderate to heavy, averaged 10+ per animal on Angus and Hereford cattle in Fayette and Scott Counties. (Barnett).

BROWN RECLUSE SPIDER (*Loxosceles reclusa*) - OKLAHOMA - About 200 found while tearing down farm outbuilding in Lincoln County. (Okla. Coop. Sur.).

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*Powell, J.A. 1964. Univ. Calif. Pub. Ent. 32:112

HOUSEHOLDS AND STRUCTURES

BROWNBANDED COCKROACH (Supella longipalpa) - OREGON - Infested several homes in Coos Bay, Coos County. (Shroeder, Feb. 5). This is a new county record. (Penrose).

WESTERN SUBTERRANEAN TERMITE (Reticulitermes hesperus) - OREGON - Winged forms in and around residences in Umatilla, Coos, and Marion Counties in January and February. Early flights due to warm weather. (Capizzi, Bluhm).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

CITRUS BLACKFLY (Aleurocanthus woglumi) - MEXICO - Detected 23 new infestations within the city of Matamoros, Tamaulipas, during period February 5-11. Infested properties scattered throughout 110-block area. Eight of these infestations along bank of Rio Grande. Eradication treatments underway, 3,000 trees involved. (PPD).

IMPORTED FIRE ANT (Solenopsis saevissima richteri) - TENNESSEE - Surveys by State and Federal personnel negative in Coffee, Davidson, Franklin, Giles, Lawrence, Marshall, Maury, Williamson, Warren, Wilson, Rutherford, Shelby, Tipton, Dyer, Hardeman, Hardin, Madison, and McNairy Counties. (Gordon).

WHITE GARDEN SNAIL (Theba pisana) - CALIFORNIA - Eradication treatment for this serious pest continued with completion of second baiting at Manhattan Beach, Los Angeles County. Survey of area for evidence of live snails will precede third bait application. (Cal. Coop. Rpt.).

Weather of the week continued from page 80.

A weekend storm moved from the Deep South to the lower St. Lawrence River Valley spreading precipitation from the Gulf of Mexico to Lakes Erie and Ontario, and eastward to the Atlantic Ocean. Heavy snow fell in the Appalachians from eastern Tennessee to New England. Freezing rain or freezing drizzle fell east and south of the snow belt. Strong winds drifted the snow badly, and the freezing precipitation iced the highways. The strong winds, deep drifts, and icy roads made travel difficult, and in some places impossible. Snow accumulated to over 20 inches at some locations in Pennsylvania. Numerous streams in Pennsylvania rose to above flood stage, but the cold weather prevented rapid thawing and extensive major flooding. One person was drowned in Berks County when his automobile was swept from the road by high water. By Monday morning, February 15, the only precipitation was intermittent rain in the Far Northwest, and spotty snow or freezing drizzle from Wisconsin to north-central Kentucky and western New York.

TEMPERATURE: Frigid air continued its southward plunge over the middle and eastern parts of the Nation early in the week. The temperature at Waterloo, Iowa, dropped to -26° Monday morning. A dozen and a half States recorded subzero temperatures Tuesday or Wednesday morning when Nashville, Tennessee, registered -1° on these days. Frost or freezing weather occurred over all of Texas, except along the lower Rio Grande, on several mornings early in the week and in northern and central Florida. Pacific air brought a warming trend to the western and central portions of the Nation. Tulsa, Oklahoma, recorded a 16° maximum Monday, but by Wednesday the mercury had climbed to 60°. Great Falls, Montana, with 52° was as warm as Tampa, Florida, Wednesday afternoon, and Bismark, North Dakota, with 35° Wednesday afternoon was 10° warmer than Lexington, Kentucky. The mild Pacific air continued its warming effects after midweek. By Thursday, afternoon temperatures over almost the entire Nation were above freezing. Subfreezing weather lingered from northeastern North Dakota to Upper Michigan and over the Northeast. Temperatures climbed into the 60's in Florida and into the 80's or higher in southern California, where on Thursday Thermal recorded 94°. The temperature extremes for the week ranged from -40° at Eagle River, Wisconsin, Monday morning to 94° at Thermal, California, Thursday. Weekly mean temperatures averaged above normal over the western half of the Nation and below normal over the eastern half. The Great Basin and the northern Rocky Mountains averaged 9° to 18° warmer than normal. Much of the Deep South averaged 9° to 18° colder than normal. (Summary supplied by Environmental Data Service, ESSA.)

HAWAII INSECT REPORT

Turf, Pasture - Numerous adults of a SKIPPER (Hylephila phylaeus) noted on flowers of Verbesina spp. and Dendrobium spp. at Hawaii Kai, Oahu; about 15 miles from original site of discovery in September 1970. (Komatsu, Hanaoka).

General Vegetables - All stages of LEAFMINER FLIES (Liriomyza spp.), CARMINE SPIDER MITE (Tetranychus cinnabarinus), and GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) in mixed populations generally trace to light in fields of snap beans, Chinese peas, see-qua (Luffa acutangula) and bittermelon at Pupukea and Haleiwa, Oahu. Greenhouse whitefly adults up to 70 per square inch on young leaves in 0.75-acre planting of bittermelon at Pupukea; also heavy in most snap beans and cucumber fields at Waimanalo. WATERLILY APHID (Rhopalosiphum nymphaeae) adults averaged 20 per leaf in 2 acres of taro (Colocasia esculenta) at Waihee, Maui; 20 percent of plants infested. (Miyahira). BEAN FLY (Melanagromyza phaseoli) adults 1 per 3 seedlings in 0.25 acre of snap beans at Waimanalo, Oahu. In January severe larval infestation necessitated replanting in this field. (Kawamura).

Fruits and Nuts - COCONUT SCALE (Aspidiotus destructor) generally trace in most papaya and banana plantings in windward Oahu. Generally light on most coconut trees in same area and at Hawaii Kai. Adults of Telsimia nitida and Lindorus lophanthae (lady beetles) also light on some infested pinnae. (Kawamura).

General Pests - Up to 300 nymphs and adults of a PLATASPID BUG (Coptosoma xanthogramma) heavy on several foot-long maunaloa vines (Canavalia cathartica) at Kaneohe, Oahu. (Au).

Man and Animals - Trapped 2,261 VEXANS MOSQUITO (Aedes vexans nocturnus) and 9,324 SOUTHERN HOUSE MOSQUITO (Culex pipiens quinquefasciatus) in 55 light traps on Oahu during January. Aedes up to 1,668 at Kahaluu and Culex up to 2,540 per trap. (Mosq. Cont. Br., Dept. of Health).

Beneficial Insects - Adults of a SCIOMYZID FLY (Sepedon sauteri) light on watercress (Nasturtium officinale) farm at Pearl City, Oahu. This liverfluke snail predator, purposely introduced from Fukuoka, Japan, in 1967, now appears to be dominant of several introduced species. (Kashiwai).

Miscellaneous Pests - Single adult male of a LONGHORN GRASSHOPPER (Euconocephalus nasutus) collected at Hoolehua, Molokai, for a new island record, and substantiates reports of loud stridulations for past few months on this island. (Miyahira).

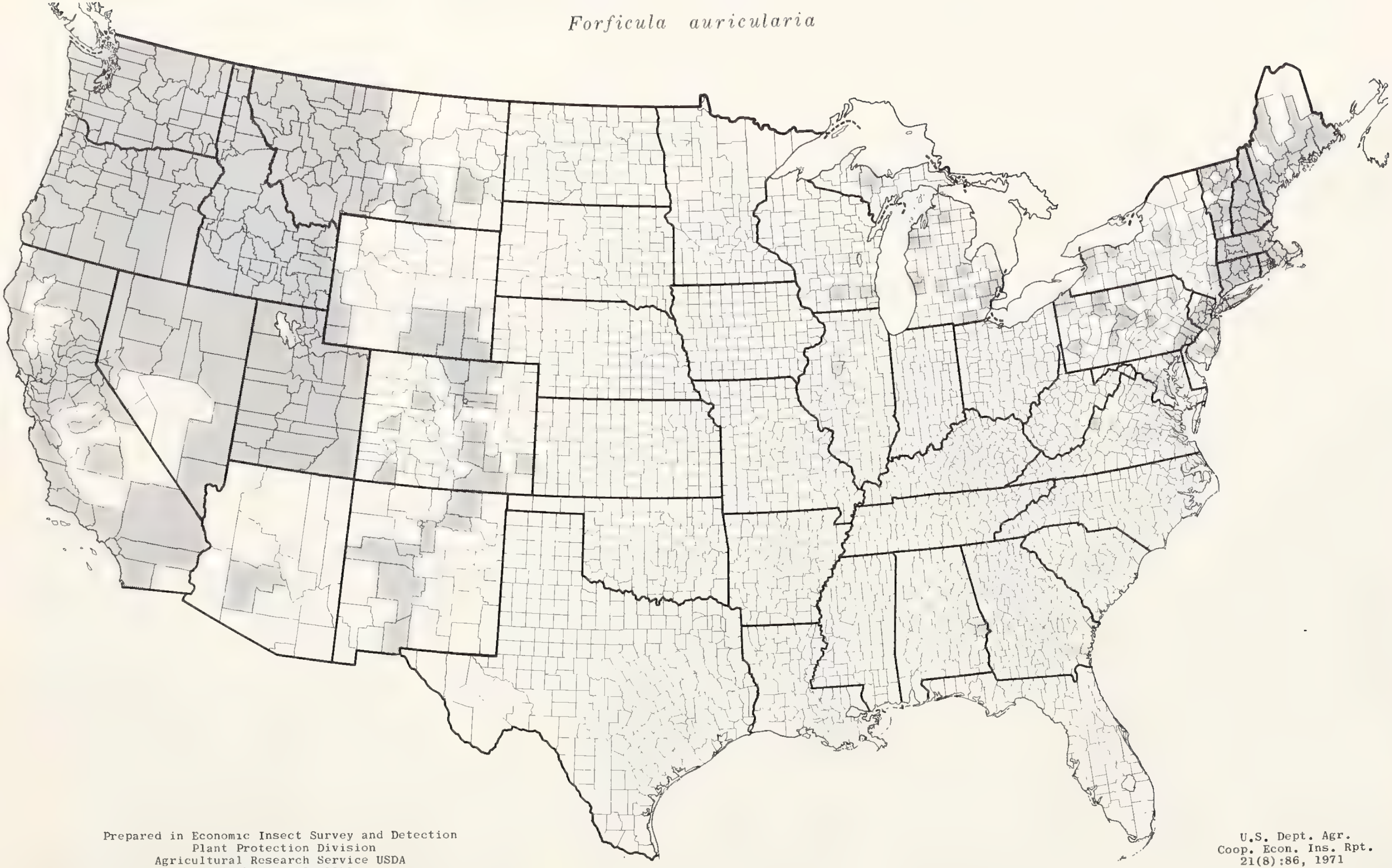
DETECTION

New State Record - A CICADA (Diceroprocta vitripennis) WISCONSIN - Sauk County (p. 83).

New County and Island Records - AN ARMORED SCALE (Fiorinia fioriniae) FLORIDA - Indian River (p. 83). BROWNBANDED COCKROACH (Supella longipalpa) OREGON - Coos (p. 84). STRIPED MEALYBUG (Ferrisia virgata) CALIFORNIA - San Bernardino (p. 83). HOLLYHOCK WEEVIL (Apion longirostre) MISSOURI - Nodaway (p. 83). A ROOT MEALYBUG (Rhizoecus americanus) FLORIDA - Sarasota (p. 83). A LONGHORN GRASSHOPPER (Euconocephalus nasutus) HAWAII - Molokai (p. 85).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville, 2/5-11, BL - Black cutworm (Agrotis ipsilon) 1, granulate cutworm (Feltia subterranea) 5.



Distribution of European Earwig

Forficula auricularia

Prepared in Economic Insect Survey and Detection
Plant Protection Division
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February 12, 1971

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SURVEY METHODS

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Part XXXIV

Additional copies of Parts I through XXXIV of this bibliography are available from Economic Insect Survey and Detection.

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See also Snow et al. in Trap Section.

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